

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

Claim 1 (Previously Presented): A process for preparing hydrogen cyanide by autothermal noncatalytic oxidation of one or more nitrogenous hydrocarbons or a nitrogenous hydrocarbon mixture wherein said nitrogenous hydrocarbons, an oxygen-containing gas, with or without ammonia, with or without water, with or without a gas comprising nitrogen oxides and with or without other essentially inert feed gas constituents are introduced into a flame reaction zone, react in the flame reaction zone and a post-reaction zone at a temperature of from 1000 to 1800°C for a reaction time of 0.03 to 0.3 s to form a cleavage gas which comprises hydrogen cyanide, carbon oxides, hydrogen, water, ammonia, nitrogen, light hydrocarbons with or without other cleavage gas constituents, the atomic C/N ratio in the reaction zones being from 1 to 7 and the atomic air ratio λ_{ato} being <0.6, said cleavage gas being cooled and separated.

Claim 2 (Previously Presented): A process as claimed in claim 1, wherein said ammonia is introduced into said flame reaction zone.

Claim 3 (Previously Presented): A process as claimed in claim 1, wherein said nitrogenous hydrocarbons have a C/N ratio of from 1 to 5.

Claim 4 (Previously Presented): A process as claimed in claim 1, wherein the said nitrogenous hydrocarbons have a C/N ratio of from 5 to 7.

Claim 5 (Previously Presented): A process as claimed in claim 1, wherein said nitrogenous hydrocarbons are one or more residues.

Claim 6 (Previously Presented): A process as claimed in claim 1, wherein water is introduced into said flame reaction zone.

Claim 7 (Previously Presented): A process as claimed in claim 1, wherein one or more additional essentially inert behaving feed gas constituents are introduced into said flame reaction zone.

Claim 8 (Previously Presented): A process as claimed in claim 7, wherein said essentially inert-behaving feed gas constituents comprise carbon oxides and/or hydrogen obtained from said cleavage gas.

Claim 9 (Previously Presented): A process as claimed in claim 1, wherein said gas comprising nitrogen oxide is introduced into said flame reaction zone.

Claim 10 (Previously Presented): A process as claimed in claim 1, wherein said nitrogenous hydrocarbons or said hydrocarbon mixture are/is introduced in liquid form into said flame reaction zone.

Claim 11 (Previously Presented): A process as claimed in claim 10, wherein said nitrogenous hydrocarbons are atomized to form liquid droplets having a mean particle diameter of <100 μm .

Claim 12 (Previously Presented): A process as claimed in claim 10, wherein said nitrogenous hydrocarbons or said hydrocarbon mixture is/are introduced as an aqueous emulsion into said flame reaction zone.

Claim 13 (Previously Presented): A process as claimed in claim 12, wherein said aqueous emulsion is atomized to form liquid droplets having a particle diameter of <100 µm.

Claim 14 (Previously Presented): A process as claimed in claim 1, wherein said nitrogenous hydrocarbons are introduced in the gaseous state into said flame reaction zone.

Claim 15 (Previously Presented): A process as claimed in claim 14, wherein said gaseous nitrogenous hydrocarbons are premixed with at least a part of the feed gas constituents selected from the group consisting of f said oxygen-containing gas, said ammonia, said gas comprising nitrogen oxide, said water and said essentially inert-behaving feed gas constituents, and the resultant gas mixture is introduced into said flame reaction zone.

Claim 16 (Previously Presented): A process as claimed in one of claim 1, wherein turbulent flow prevails in said reaction zones.

Claim 17 (Previously Presented): A process as claimed in claim 1, wherein the separation of said cleavage gas comprises:

- (i) cooling said cleavage gas to a temperature <300°C;

- (ii) removing said ammonia as ammonium sulfate or ammonium phosphate by gas scrubbing to obtain an ammonia-depleted cleavage gas;
- (iii) removing said hydrogen cyanide as aqueous hydrogen cyanide solution to obtain a hydrogen cyanide-depleted and ammonia-depleted residual cleavage gas;
- (iv) recovering hydrogen cyanide from said aqueous hydrogen cyanide solution by distillation; and
- (v) ~~where appropriate~~ optionally, partially recirculating said residual cleavage gas to the said flame reaction zone.

SUPPORT FOR THE AMENDMENTS

Claim 17 has been amended.

The amendment of Claim 17 is supported by the corresponding originally filed claim.

No new matter has been added by the present amendments.